## IV. Reimbursement System

### A. Data Sources

In the development of each Hospital's standard payment amount per discharge (SPAD), the Division used June 1, 1999 through May 31, 2000 MassHealth audited paid SPAD claims; the FY98 DHCFP 403 report, as screened and updated as of September 15, 2000, submitted by each Hospital to DHCFP; and the RY98 Merged Casemix/Billing Tapes as accepted by DHCFP, as the primary sources of data to develop base operating costs. The wage area adjustment was derived from the CMS Hospital Wage Index Public Use File (FY97 Final, updated as of May 12, 2001).

### B. Methodology for Inpatient Services

#### 1. Overview

In the development of each Hospital's standard payment amount per discharge (SPAD), Division used casemix discharge data submitted to DHCFP by the Hospital, as accepted into DHCFP's database as of July 22, 2002, for the period October 1, 2000, through September 30, 2001, which was then matched with MassHealth SPAD and transfer claims for the same period to ensure that only MassHealth claims were included in the final casemix index calculations; the FY98 DHCFP 403 cost report as screened and updated as of September 15, 2000; and the RY98 Merged Casemix/Billing Tapes as accepted by DHCFP as the primary sources of data to develop base operating costs. The wage area adjustment was derived from the CMS Hospital Wage Index Public Use File (FY99 Final, updated as of May 10, 2002).

Payments for inpatient services provided to MassHealth members not enrolled in an MCO, other than for psychiatric services provided in Distinct Part Psychiatric Units, will consist of the sum of 1) a statewide average payment amount per discharge that is adjusted for wage area differences and the Hospital-specific MassHealth casemix; 2) a per discharge, Hospital-specific payment amount for Hospital-specific expenses for malpractice and organ acquisition costs; 3) a per discharge, Hospital-specific payment amount for direct medical education costs which includes a Primary Care training incentive and a specialty care reduction; and 4) a per discharge payment amount for the capital cost allowance, adjusted by Hospital-specific casemix. Each of these elements is described in **Sections IV.B.2** through **IV.B.6**.

Payment for psychiatric services provided in Distinct Part Psychiatric Units to MassHealth patients who are not served either through a contract between the Division and its BH contractor or an MCO shall be made through an all-inclusive regional weighted average per diem updated for inflation.

Payment for physician services rendered by Hospital-Based Physicians will be made as described in **Section IV.B.10**.

## 2. Calculation of the Standard Payment Amount Per Discharge (SPAD)

The statewide average payment amount per discharge is based on the actual statewide costs of providing Inpatient Services in FY98. The statewide average payment amount per discharge for RY03 was determined using the FY98 DHCFP Merged Billing and Discharge Data and the FY98 DHCFP 403 as screened and updated as of September 15, 2000.

The average payment amount per discharge in each Hospital was derived by dividing total inpatient Hospital costs by total inpatient Hospital discharges, omitting those costs and discharges from Excluded Units. Routine outpatient costs associated with admissions from ED and routine and ancillary outpatient costs resulting from admissions from observation status were included. The cost centers that are identified as the supervision component of physician compensation and other direct physician costs were included; professional services were excluded. All other medical and non-medical patient care-related staff expenses were included.

Malpractice costs, organ acquisition costs, capital costs and direct medical education costs were excluded from the calculation of the statewide average payment amount per discharge.

The average payment amount per discharge for each Hospital was then divided by the Hospital's Massachusetts-specific wage area index and by the Hospital-specific FY98 all-payer casemix index using the version 12.0 New York Grouper and New York weights. For the non-exempt Massachusetts Hospitals in the areas designated by the Geographical Classification Review Board of the Centers for Medicare and Medicaid Services, effective September 1, 1995, the average hourly wage of each area was calculated from the CMS Hospital Wage Index Public Use File (FY97 Final, updated as of May 12, 2001). Each area's average hourly wage was then divided by the statewide average hourly wage to determine the area's wage index. For the calculation of the Springfield area index, Bay State Medical Center's wages and hours were included. This step results in the calculation of the standardized costs per discharge for each Hospital.

The non-exempt Hospitals were then ranked from lowest to highest with respect to their standardized costs per discharge; a cumulative frequency of MassHealth discharges for the Hospitals was produced from the casemix data described above. The RY03 efficiency standard was established at the cost per discharge corresponding to the position on the cumulative frequency of discharges that represents 75 percent of the total number of statewide discharges for October 1, 2000 through September 30, 2001. The RY03 efficiency standard is $3,310.10.

The RY03 statewide average payment amount per discharge was then determined by multiplying a) the weighted mean of the standardized cost per discharge, as limited by the efficiency standard; by b) the outlier adjustment factor of ninety-five percent (95%); and by c) an inflation factor of 1.9% which reflects price changes between RY98 and RY99; by d) an inflation factor of 1.43% which reflects price changes between RY99 and RY00; by e) an inflation factor of 2.4% which reflects price changes between RY00 and RY01; f) and inflation factor of 1.152% which reflects the price changes between RY01 and RY02; and g) an inflation factor of 2.226%, which reflects price changes between RY02 and RY03. Each inflation factor is a blend of the CMS market basket and the Massachusetts Consumer Price Index (CPI). Specifically, the CPI replaces the labor-related component of the CMS market basket to reflect conditions in the Massachusetts economy. The resulting RY03 statewide average payment amount per discharge is $2,825.78.

The RY03 statewide average payment amount per discharge was then multiplied by the Hospital's MassHealth casemix index adjusted for outlier acuity (using version 12.0 of the New York Grouper and New York weights) and the Hospital's Massachusetts specific wage area index to derive the Hospital-specific standard payment amount per discharge (SPAD). To develop the Hospital's RY03 casemix index, the Division used casemix discharge data submitted to DHCFP by the Hospital, as accepted into DHCFP's database as of July 22, 2002, for the period October 1, 2000, through September 30, 2001, which was then matched with the MassHealth SPAD and transfer claims for the same period to ensure that only MassHealth claims were included in the final casemix index calculations, to develop the Hospital's RY03 casemix index. The casemix data did not include discharges from excluded units. The wage area indices were derived from the CMS Hospital Wage Index Public Use File (FY99, updated as of May 10, 2002).

Costs for outpatient ancillary services for Members admitted from observation status are included in Hospital-specific SPADs.

An outlier adjustment is used for the payment of Outlier Days as described in **Section IV.B.9.**

When groupers are changed and modernized, it is necessary to adjust the base payment rate so that overall payment levels are not affected solely by the grouper change. This aspect of "budget neutrality" is an approach that the Division is following, and one that has been a feature of the Medicare DRG program since its inception. The Division reserves the right to update to a new grouper.

3. **Calculation of the Pass-through Amount per Discharge**

The inpatient portion of malpractice and organ acquisition costs was derived from each Hospital's FY01 DHCFP 403 cost report as screened and updated by DHCFP as of July 26, 2002. This portion of the pass-through amount per discharge is the sum of the Hospital's per discharge costs of malpractice and organ acquisition. In each case, the amount is calculated by dividing the Hospital's inpatient portion of expenses by the number of total, all-payer days and then multiplying the cost per diem by the Hospital-specific MassHealth (non-psychiatric/substance abuse) average length of stay from casemix data.

This portion of the RY03 pass-through amount per discharge is the product of the per diem costs of inpatient malpractice and organ acquisition and the Hospital-specific MassHealth average length of stay from casemix data, extracted from DHCFP's casemix data base as of July 22, 2002, omitting such costs related to services in Excluded Units. The days used in the denominator are also net of days associated with such units.

4. **Direct Medical Education**

The inpatient portion of direct medical education costs was derived from each Hospital's FY01 DHCFP 403 cost report submitted to DCHFP, as screened and updated as of July 22, 2002. This portion of the Pass-Through amount was calculated by dividing the Hospital's inpatient portion of direct medical education expenses by the number of total inpatient days and then multiplying the cost per diem by the Hospital-specific MassHealth (non-psychiatric/substance abuse) average length of stay from the casemix data referenced in this section above. The Division has incorporated an incentive in favor of Primary Care training which was factored into the recognized direct medical education costs by weighting costs in favor of Primary Care resident training. An incentive of 33% of each Hospital's costs was added to its per discharge cost of Primary Care resident training; 20% of each Hospital's costs was subtracted from its per discharge costs of specialty care resident training, provided, however, that the 20% reduction was not applied to the costs of specialty care resident training at Pediatric Specialty Hospitals and Hospitals with Pediatric Specialty Units. The number of Primary Care and specialty care residents was derived from data provided to the Division by the Hospitals. For purposes of this provision, Primary Care resident training is training in internal medicine for general practice, family practice, OB/GYN, or pediatrics.

5. **Capital Payment Amount per Discharge**

The RY03 capital payment per discharge is a standard, prospective payment for all Hospitals except for those Hospitals with unique circumstances as set forth in **Section IV.D**, which meet the criteria set forth in the final paragraph of this section. The capital payment is a casemix-adjusted capital cost limit, based on the FY98 DHCFP 403 Cost Report as screened and updated as of September 15, 2000, updated for inflation.

For each Hospital, the total inpatient capital costs include building and fixed equipment depreciation, major moveable equipment depreciation, major moveable equipment, and long- and short-term interest. Total capital costs are allocated to Inpatient Services through the square-footage-based allocation formula of the DHCFP 403 Cost Report. Capital costs for Excluded Units were omitted to derive net inpatient capital costs. The capital cost per discharge for RY03 was calculated by dividing total net inpatient capital costs by the Hospital's total FY98 days, net of Excluded Units' days, and then multiplying by the Hospital-specific acute MassHealth average length of stay from casemix data from the period October 1, 2000 to September 30, 2001.

The RY03 casemix-adjusted capital efficiency standard was determined by a) dividing each Hospital's FY98 capital cost per discharge by its FY98 MassHealth casemix index; b) sorting these adjusted costs in ascending order; and c) producing a cumulative frequency of discharges. The casemix-adjusted efficiency standard was established at the capital cost per discharge corresponding to the position on the cumulative frequency of discharges that represents 75 percent of the total number of statewide discharges.

Each Hospital's capital cost per discharge was then held to the lower of their capital cost per discharge or the casemix-adjusted efficiency standard, to arrive at a capped capital cost per discharge. Each Hospital's capped capital cost per discharge is then multiplied by the Hospital's number of MassHealth discharges. The product of the capped capital cost per discharge and the number of MassHealth discharges for each Hospital was then summed and divided by the total number of MassHealth discharges statewide, to arrive at a statewide weighted average capital cost per discharge.

The statewide weighted average capital cost per discharge was then updated for inflation between RY98 and RY99 by a factor of 0.80%; between RY99 and RY00 by a factor of 0.00% (no inflation adjustment); between RY00 and RY01 by a factor of 0.90%; between RY01 and RY02 by a factor of 0.80%; and between RY02 and RY03 by a factor of 0.7%. The capital update factor was taken from annual CMS regulations, and is the factor used by CMS to update the capital payments made by Medicare. The statewide weighted average capital cost per discharge for RY03 is $345.02.

The Hospital-specific capital payment per discharge was determined by multiplying the statewide weighted average capital cost per discharge of $345.02by the Hospital's RY03 casemix index as determined in **Section IV.B.5** above.

If a Hospital's RY01 capital payment per discharge is greater than its RY02 capital payment per discharge is greater than its RY03 capital payment per discharge as calculated above and adjusted for inflation and case mix, and the Hospital otherwise qualifies for reimbursement pursuant to **Section IV.D**, the Hospital's RY03 capital payment will equal the Hospital's incurred capital costs, capped at twice the statewide weighted average capital cost per discharge.

**6. Maternity and Newborn Rates**

Maternity cases in which delivery occurs will be paid on a SPAD basis with one SPAD paid for the mother and one SPAD paid for the newborn. Payment for *all* services (except physician services) provided in connection with such a maternity stay is included in the SPAD amount.

**7. Payment for Psychiatric Services in Distinct Part Psychiatric Units**

Services provided to MassHealth patients in Distinct Part Psychiatric Units who are not enrolled with the BH Contractor or an MCO shall be paid through an all-inclusive regional weighted average per diem. This payment mechanism does not apply to cases in which psychiatric or substance abuse services are provided to MassHealth Members assigned to the BHP or an MCO, except as set forth in **Sections III.A.1** and **2.**

The regions used to develop the all-inclusive regional weighted average per diem rates correspond to the Psychiatric Health Services Areas established by the Division as described in Exhibit 10. . These regional weighted average per diems were calculated by a) dividing each Hospital's per-discharge psychiatric rate established in the RY92 MassHealth RFA by the FY90 average length of stay pertaining to MassHealth psychiatric patients; b) multiplying the result for each Hospital by the ratio of the Hospital's MassHealth psychiatric days to the total MassHealth psychiatric days for the Hospital's region; and c) summing the results for each region. The regional weighted average per diems were updated using inflation factors of 3.35% to reflect price changes between RY92 and RY93; 3.01% to reflect price changes between RY93 and RY94; 2.80% to reflect price changes between RY94 and RY95; 3.16% to reflect price changes between RY95 and RY96; 2.38% to reflect price changes between RY96 and RY97; 2.14% to reflect price changes between RY97 and RY98; 1.90% to reflect price changes between RY98 and RY99; 1.43% to reflect price changes between RY99 and RY00; 2.4% to reflect price changes between RY00 and RY01; 1.152% to reflect price changes between RY01 and RY02; and 2.226% to reflect price changes between RY02 and RY03. Notwithstanding any provision to the contrary herein in RY03, in accordance with the Acts and Resolves of 2002, those Hospitals that are located in the Northeast Region established by the Department of Mental Health shall have a per-diem rate of $646.77.

**8. Transfer Per Diem Payments**

**a. Transfer Between Hospitals**

In general, payments for patients transferred from one Acute Hospital to another will be made on a transfer per diem basis capped at the SPAD for the Hospital that is transferring the patient.

In general, the Hospital that is receiving the patient will be paid on a per discharge basis in accordance with the standard methodology specified in **Sections IV.B.2** through **5**, if the patient is discharged from that Hospital. If the patient is transferred to another Hospital, then the transferring Hospital will be paid at the Hospital-specific transfer per diem rate, capped at the Hospital-specific per discharge amount. Additionally, "back transferring" Hospitals (Hospitals to which a patient is first admitted and then transferred back after having been transferred to another Acute Hospital) will be eligible for outlier payments specified in **Section IV.B.9** below.

Except as otherwise provided in the following paragraph, the RY03 payment per day for Transfer Patients shall equal the statewide average payment amount per discharge divided by the FY98 average all-payer length of stay of 4.5035 days, to which is added the Hospital-specific capital, direct medical education and pass-through per diem payments which are derived by dividing the per discharge amount for each of these components by the Hospital's MassHealth average length of stay from casemix data.

For Hospitals with unique circumstances reimbursed in accordance with the methodology specified in **Sections IV.D.1** through **3**, the RY03 payment amount per day for transfer patients shall equal the individual Hospital's standard inpatient payment amount per discharge divided by the individual Hospital's FY98 all-payer length of stay, to which is added the Hospital-specific capital, direct medical education and pass-through per diem payments which are derived by dividing the per discharge amount for each of these components by the Hospital's MassHealth average length of stay from casemix data.

The transfer per diem as calculated above will be increased by multiplying the Hospital-specific transfer per diem by 1.25. These enhanced transfer per diem payments for such Members will be capped at the Hospital-specific SPAD. Refer to matrices attached in **Exhibit 4** for a review of transfer scenarios and corresponding payment mechanisms involving BHP-eligible and BHP-ineligible Members in BH Contractor's network and non-network Hospitals.

**b. Transfers within a Hospital**

In general, a transfer within a Hospital is not considered a discharge. Consequently, in most cases a transfer between units within a Hospital will be reimbursed on a per diem basis. This section outlines reimbursement under some specific transfer circumstances. For a more comprehensive review of reimbursement under transferring circumstances involving BHP-eligible Members and BHP-ineligible Members in the BH network and non-network Hospitals, refer to the matrices attached in **Exhibit 4**.

**(1) Transfer to/from a Non-Acute Unit within the Same Hospital**

If a patient is transferred from an acute bed to a Non-Acute unit in the same Hospital, the transfer is considered a discharge. The Division will pay the Hospital-specific SPAD for the portion of the stay before the patient is transferred to a Non-Acute Unit.

(2) **MassHealth Payments for Newly Eligible Members, Members Who Enroll in the PCC Plan during a Hospital Stay, or in the Event of Exhaustion of Other Insurance**

When a patient becomes MassHealth-eligible, enrolls in the PCC Plan during the course of a Hospital stay, or exhausts other insurance benefits after the date of admission and prior to the date of discharge, the acute stay will be paid at the transfer per diem rate, up to the Hospital-specific SPAD, or, if the patient is at the Administrative Day level of care, at the AD per diem rate. An acute stay that exceeds 20 days from the day the patient becomes MassHealth-eligible, enrolls in the PCC Plan, or exhausts other insurance benefits are eligible for outlier payments, subject to all of the conditions set forth in **Section IV.B.9.a below**.

(3) **Admissions Involving One-Day Length of Stay Following Outpatient Surgical Services**

If a patient who requires Hospital inpatient services is admitted for a one-day stay following outpatient surgery, the Hospital shall be paid at the transfer per diem rate instead of the Hospital-specific SPAD.

(4) **Transfer between a Distinct Part Psychiatric Unit and Any Other Bed within the Same Hospital**

Reimbursement for a transfer between a Distinct Part Psychiatric Unit and any other bed within a Hospital will vary depending on the circumstances involved, such as managed care status, BH Network or Non-Network Hospital, or the type of service provided. Please refer to the appropriate matrix in **Exhibit 4** for reimbursement under specific transfer circumstances involving psychiatric and substance abuse stays.

(5) **Change of Managed Care Status during a Psychiatric or Substance Abuse Hospitalization**

(a) **Payments to Hospitals *without* Network Provider Agreements with the Division's BH Contractor**

When a Member enrolls in the BHP during a non-emergency or emergency psychiatric or substance abuse admission at a non-network Hospital, the portion of the Hospital stay during which the Member is enrolled in the BHP shall be paid by the Division's BH Contractor provided that the Hospital complies with the BH Contractor's service authorization and billing policies and procedures. The portion of the Hospital stay during which the Member was not enrolled in the BHP will be paid by the Division at the psychiatric per diem rate for psychiatric services or at the transfer per diem rate for substance abuse services, capped at the Hospital-specific SPAD.

(b) **Payments to Hospitals *with* Network Provider Agreements with the Division's BH Contractor**

When a member enrolls in the BHP during an emergency or non-emergency psychiatric or substance abuse Hospital admission, the portion of the Hospital stay during which the Member is enrolled in the BHP shall be paid by the Division's BH Contractor, provided that the Hospital complies with the BH Contractor's service authorization and billing policies and procedures. The portion of the Hospital stay during which the Member was not enrolled in the BHP will be paid by the Division at the psychiatric per diem for psychiatric services or at the transfer per diem rate for substance abuse services, capped at the Hospital-specific SPAD.

**9. Outlier Payments**

**a. Eligibility**

A Hospital qualifies for an outlier per diem payment equal to 60% of the Hospital's enhanced transfer per diem, in addition to the Hospital-specific standard payment amount per discharge if ***all*** of the following conditions are met:

(1) the length of stay for the Hospitalization exceeds twenty (20) cumulative *acute* days (not including days in a Distinct Part Psychiatric Unit);